12-15V adjustable, 180W

SL10.104

- Input: AC 230/115V, DC 240...375V
- Output: 12-15V/180W
- PULS Overload Design™: 20% Power boost up to 215W; high overload current, no switch-off
- Robust mechanics and EMC
- DC ok LED
- Inrush current limiting and Overtemperatur protection

Input

- Input voltage: AC100-120/210-240V (Manual Select), 50-60 Hz (AC 85...132/176...264V, DC 240...375V, 47-63 Hz)
- Note: At DC input, always leave the switch in the 230V position
- Input current I_n: <5A (switch in 115V position) <2.3A (switch in 230V position)

<table>
<thead>
<tr>
<th>Voltage</th>
<th>AC100V</th>
<th>AC120V</th>
<th>AC230V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power factor</td>
<td>0.67</td>
<td>0.64</td>
<td>0.54</td>
</tr>
</tbody>
</table>

- Inrush current I_pk: 37A
- Fuse loading I_t: 4.6A²s
- at T_amb = +50°C, cold start

Output

- Output voltage: DC 12-15V, adjustable by (covered) front panel potentiometer; preset: 12V ±0.5%
- Rated continuous loading with convection cooling
  - T_amb=0°C - 60°C: 12V/15A (180W) resp. 15V/12A
  - T_amb=0°C - 45°C: 12V/18A (215W) resp. 15V/14.4A
- Short-term also at 60°C (< 1 min)
- Output is protected against short-circuit, open circuit and overload
- Short-circuit current: 21A min., 28A max.
- Ambient temperature range: Operation: 0°C...+70°C (>60°C: Derating)
  Storage: -40°C...+85°C
- Derating typ. 5 W/K (at T_amb = +60°C...+70°C)
- Voltage regulation < - 150mV overall
- Ripple / Noise <50mVpp, (20MHz bandwith, 50Ω measurement)
- Serial operation not allowed
- Parallel operation not allowed
- Overvolt. protection typ. 19V
- Power back immunity < 18V
- Front panel indicator: Green LED on front panel

Efficiency, Reliability etc.*

- Efficiency: >87% (AC 230V, 12V/15A)
- Losses: <26.9W (AC 230V, 12V/15A)
- MTBF: 425.000h acc. to Siemensnorm SN 29500 (12V/15A, AC 230V, T_amb = +40°C)

* For further information see data sheets „The SilverLine“, „SilverLine Family Branches“ and mechanics data sheet

Construction / Mechanics*

- Housing dimensions and Weight
  - W x H x D: 120mm x 124mm x 102mm (+ DIN rail)
  - Free space for ventilation: above/below 25mm recommended
  - Weight: 980g
- Connection: Screw terminals, input=3, output=4
- Wire gauge: 0,5...4mm² / 20...10 AWG
- Comm. tightening torque: 0,8Nm / 7lb.in
- Wire stripping length: 7mm / 0,275"

Ordering information

<table>
<thead>
<tr>
<th>Order number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL10.104</td>
<td>SilverLine switched-mode power supply</td>
</tr>
<tr>
<td>SLZ14</td>
<td>Adapter for S7-300 rail</td>
</tr>
<tr>
<td>SLZ02</td>
<td>Wall mounting set</td>
</tr>
</tbody>
</table>

* For further information see data sheets „The SilverLine“, „SilverLine Family Branches“ and mechanics data sheet
Start / Overload Behaviour

Startup delay: typ. 0.22s
Rise time: 5...25ms, depending on load

Overload Behaviour
- Special PULS Overload – Design (see diagram overleaf)
- 20% power boost – 18A short-term, at 45°C or forced cooling even continuous

Advantages:
- High short-circuit current, giving large ‘start-up window’: unit starts reliably even with heavy loads (DC-DC converters, motors).
- No ‘sticking’ such as can occur with fold-back characteristics
- Secondary fuses operate more reliably

Electromagnetic Compatibility (EMC)

Emissions
- EN 61000-6-4, Class B (EN 55011, EN 55022)
- EN 61000-3-3
- Output power less than 98W: EN 61000-3-2 Class A and EN 61000-6-3 are fulfilled.
- Output power more than 98W: EN 61000-3-2 Class A and EN 61000-6-3 are not fulfilled.

Immunity
- EN 61000-6-2 (also includes EN 61000-6-1)
- Electromagnetic radiated fields: EN 61000-4-3, Level 3 (10V/m)
- Burst, coupled to: EN 61000-4-4,
  - ACin-lines: Level 4 (4kV)
  - DCout-lines: Level 3 (2kV)
- Surge transients: EN 61000-4-5
  - (L -> PE): Installation class 4 (4kV)
  - (N -> PE): Installation class 4 (4kV)
  - (L -> N): Installation class 4 (2kV)
- Conducted noise immunity: EN 61000-4-6,
  - Level 3 (10V, 150kHz - 80MHz)
- Voltage Dips: EN 61000-4-11
- Transient immunity: Transient resistance acc. to VDE 0160/W2

Further information

For further information, especially about
- EMC
- Connections
- Safety, Approvals
- Mechanics und Mounting,
  see page 2 of the „The SilverLine“ data sheet.

For detailed dimensions
  see SilverLine mechanics data sheet SL2.5/ SL5/ SL10

Unless otherwise stated, specifications are valid for AC 230V input voltage, +25°C ambient temperature, and 5 min. run-in time. They are subject to change without prior notice.

Your partner in power supply:
Mechanics

SL2.5/ SL5/ SL10

- Innovative DIN-Rail mount, unit holds even at vibration or lateral pressure
- Clearly arranged and user oriented
- Large, robust screw terminals
- Sealed metal housing
- Fine ventilating grid

Order information

<table>
<thead>
<tr>
<th>Order number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL2.100</td>
<td>24V/2.5A</td>
</tr>
<tr>
<td>SL2.103</td>
<td>12-15V/40W</td>
</tr>
<tr>
<td>SL5.100</td>
<td>24V/5A</td>
</tr>
<tr>
<td>SL5.102</td>
<td>24-28V/120W</td>
</tr>
<tr>
<td>SL5.103</td>
<td>24-28V/120W</td>
</tr>
<tr>
<td>SL5.300</td>
<td>24-28V/240W, 3AC400-500V input</td>
</tr>
<tr>
<td>SL10.100 and SL10.105</td>
<td>24-28V/240W</td>
</tr>
<tr>
<td>SL10.101</td>
<td>48-56V/240W</td>
</tr>
<tr>
<td>SLZ01</td>
<td>Screw mounting set, two needed per unit</td>
</tr>
</tbody>
</table>
his 'mechanics data sheet' exclusively deals with the mechanical properties of the product. For further information (especially concerning electrical properties), please refer to the generic data sheet of the SL2.5, SL5 and SL10 and to the basic data sheet „The SilverLine“ dealing with common features of all SilverLine units. This data sheet is subject to change without prior notice.

Your partner in power supply: